Amendments to the Drawings:

The attached sheets of drawings include changes to Figures1-4.

Attachment: two replacement sheets.

REMARKS

Claims 1-17 will be pending upon entry of the present amendment.

The specification has been amended to correct typographical and grammatical errors. The amendments to the specification do not change the meaning of the texts in question, nor do they add new matter.

The Examiner has objected to Figures 1-4 as requiring a legend such as "Prior Art." Accordingly, drawings - Figures 1-4 have been amended to include the legend "Prior Art" and two sheets of drawings are presented herewith for approval.

The Examiner has rejected claims 14-17 under 35 U.S.C. § 112, first paragraph. The Examiner has stated that the specification is silent regarding "means for increasing flexibility of the substrate, claim 14, line 5" and "a plurality of blind apertures, claim 16, line 2." With regard to support in the specification for the recitation of claim 14 of a means for increasing flexibility of the substrate, applicants call the Examiner's attention to page 6 of the specification, beginning at line 4, which reads:

> according to the principles of the invention, a flexible connector is provided having a flexibility that varies over the surface of the substrate. It has greater flexibility in a localized region surrounding contact pads and greater stiffness over the rest of the connector. The greater flexibility may be provided by variations in substrate materials of the connector, or by thinning or removing selected amounts of the substrate of the connector in that region.

It is thus clear that the specification provides a description of at least three means to increase the flexibility of the connector, using different materials, thinning the material or removing the material.

In addition to the above cited reference, the specification discusses several methods and structures for modifying flexibility of a substrate. Thus, ample material is provided in the specification to support a claim reciting means for increasing flexibility of the substrate.

With respect to the question of support in the specification for a plurality of blind apertures as recited in claim 16, applicants call the Examiner's attention to Figures 7 and 8, and to the specification, beginning on page 7, line 11, which reads:

> Figures 7 and 8 show a cross-section of the flexible connector of Figure 6, taken at lines VII-VII. In Figure 7 the strain relief structures 52 are shown as apertures that completely traverse, or pass through the substrate material 12 . . . . Figure 8

shows a related embodiment, in which the structures 52a are formed by thinning the substrate material at the desired location.

A comparison of Figures 7 and 8 shows that the structures 52 and 52a differ in that the structures 52a do not pass completely through the substrate 12. Such an opening is commonly referred to as a blind aperture. Attached is page 234 of the 1966 Edition of *Webster's Third New International Dictionary The English Language Unabridged*, where a definition of the word blind as used in claim 16 may be found. For the convenience of the Examiner, the relevant section is quoted herein:

> **8 a** : having but one opening or outlet : closed at one end : not permitting passage or flow all the way through

Thus, the specification provides sufficient support for the limitations of claim 16. Claims 14-17 are clearly allowable under 35 U.S.C. § 112.

The Examiner has rejected claims 1, 2, 4, and 6-8 under 35 U.S.C. § 102(b) as being anticipated by Stopperan (5,428,190). Claims 3 and 5 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Stopperan in view of Furnival (3,977,074). Finally, the Examiner has rejected claims 9-17 under 35 U.S.C. § 103(a) as being unpatentable over prior art Figures 1 and 2 in view of Furnival.

Claim 1 recites the following:

> 1. A device, comprising:
> a flexible substrate;
> a plurality of contact pads on a first surface of the substrate; and
> a strain relief structure, positioned between two of the plurality of contact pads.

In rejecting claim 1 the Examiner has cited the insulating substrate 11 and the contact pads 40, 45, and 50, of Figure 1. The Examiner is of the view that Stopperan shows: "a strain relief structure, which is an aperture penetrating through the flexible substrate 11 from the first surface to a second surface 13, (PTHoles 25, 30, 35, . . .) positioned between two of the plurality of contact pads . . . ." Applicants disagree, Stopperan fails to teach any kind of strain relief structure associated with the flexible substrate. The PTH holes cited by the Examiner are plated-through-holes (column 2, line 18) and do not function as strain relief structures. They increase the stiffness and do not permit strain relief. Nowhere in Stopperan does he refer to these structures as providing strain relief. One reason for this is that they cannot function as strain relief structures.

Referring now to Stopperan, column 8, beginning at line 24, Stopperan states "conductive layers 15 and 20 are electrically connected through substrate 11 at various points by plated through-holes (PTH), such as holes 25, 30 and 35. Copper barrels 26, 31 and 36, formed along the inner surface of the holes 25, 30 and 35, respectively, provide the necessary electrical connection between the layers."

As the specification of the present invention explains, metallic contact pads have a tendency to stiffen a connector as the metallic surfaces of the contact pads cover a larger proportion of the surface of the flexible connector. Applicants call the Examiner's attention to page 4 of the specification, beginning on line 18, which reads "high densities of contacts can locally stiffen the connector in the region of the contacts, inasmuch as the metallic contact pads are not flexible and, as densities increase, the contact pads cover a larger proportion of the surface of the connector in the immediate region."

Stopperan, explains that the through-holes cited by the Examiner (25, 30, 35) are plated on their surfaces and on the interiors thereof. Referring to Figure 1C it can be seen that the plated through-holes include a significant amount of metal on the surfaces of the flexible connector. As explained in the specification of the present invention, such a configuration will tend to stiffen the substrate, rather than make it more flexible or relieve strain thereon. The mere existence of holes in a substrate does not automatically result in a strain relief structure, particularly in Stopperan in which a very a very rigid material, plated metal, replaces much of the material that was removed.

With reference to the plated through-holes Stopperan states the following "if the thickness of the substrate 11 used is relative thin, for example, a few mils, the length of the copper barrels is therefore also only a few mils . . . , and thermomechanical stress is never a problem, ..." (column 8, line 65-column 9, line 1). Clearly, Stopperan does not regard the plated through-holes as being strain relief structures, but instead considers the thickness—or rather the thinness—of the substrate used important in preventing the plated through-holes from causing problems due to thermomechanical stress. Thus Stopperan limits the thickness of the substrate to "a few mils".

The specification, meanwhile, discusses problems associated with the need to use multiple layers in a flexible connector, resulting in a thicker substrate, and discloses structures configured to relieve strain caused thereby. For example, in addition to the previously cited text

from the present invention's specification, see the text found on page 3, beginning on line 28, which reads:

> The substrate 12 may have multiple layers of the substrate material to accommodate high densities of circuit traces, with the electrical traces 20 being formed on the outer surfaces of the substrate 12 as well as sandwiched between internal layers. The flexibility of the connector is affected by the number of layers, the thickness of the layers, the adhesives used to bond multiple layers, the coatings on the surfaces of the connector and the overall dimensions of the connector. The number of layers and stiffness of the substrate is chosen to protect the connector 10 and traces 20 from damage caused by excessive flexing and by abrasion. If many layers are needed, due to the complexity of the circuit or the protection needed, the substrate 12 may be stiffer than desired for the electrical properties.

Stopperan is entirely silent on the question of strain relief structures, but instead depends upon an overall structure that is robust enough to withstand the overall strain without localized strain relief. For example, Stopperan states the following "The present invention may be adapted for making multilayered circuits containing many layers so long as the product retains adequate flexibility for a particular purpose" (column 17, lines 60-61). Again, Stopperan limits the thickness of the substrate to a thickness having "adequate flexibility for a particular purpose," and fails to provide a means for increasing local flexibility or relieving local strain beyond the inherent characteristics of the substrate.

Claim 1 contains the further limitation with regard to the specific location of the strain relief structures. In particular, claim 1 states "a strain relief structure, positioned between two of the plurality of contact pads." This feature is not shown in nor suggested by Stopperan. Indeed, Stopperan teaches that the through-holes are to be placed in different locations spaced away from the contact pads and certainly does not teach positioning them in between two of a plurality of contact pads. An examination of Stopperan's Figure 1A shows that none of the plated through-holes 25, 30, or 35 are positioned between any two of the contact pads 40, 45, or 50, as recited by claim 1. Thus, Stopperan fails in this respect as well. Clearly, claim 1 is allowable over Stopperan, together with dependent claims 2-8.

With respect to the Examiner's rejection of claim 8, which recites, in part, "the strain relief structure is positioned such that it interrupts one of the plurality of electrical traces," applicants herein define the term "interrupts," as it is used in this claim, as meaning to break or interrupt the electrical continuity of the recited traces. Support for this interpretation may be found in the specification on page 9, beginning at line 5. Under this interpretation of the term,

the plated through-holes of Stopperan do not interrupt the traces, but on the contrary, enhance the conduction of the traces by electrically coupling them with traces on the opposite side of the substrate. Accordingly, claim 8 is allowable over Stopperan on its own merits, apart from its dependence from an allowable claim.

The rejection of claims 3 and 5 is moot, inasmuch as these are dependent claims from allowable claim 1. Nevertheless, inasmuch as the Examiner has indicated the Furnival reference as suggesting the limitations of claims 3 and 5, Furnival fails to teach a thinned region of the flexible substrate, as recited in claim 4, which is therefore allowable on its own merits.

Claim 9 recites the following:

> 9. An electrical connector, comprising:
> a flexible substrate;
> a plurality of contact pads arranged in a regular configuration on a first surface of the substrate;
> a plurality of electrical traces on the flexible substrate, each of the plurality of electrical traces being in electrical contact with a respective one of the plurality of contact pads; and
> a plurality of apertures penetrating through the flexible substrate, the plurality of apertures arranged in a regular configuration and intercalated into the plurality of contact pads.

Furnival fails to teach a flexible substrate but rather teaches away from a flexible substrate, as found in column 2, line 1, "Figure 1 shows a printed circuit substrate 10 preferably of the rigid variety." Thus, it is inappropriate to combine the teachings of Furnival with the prior art to suggest the device of claim 9. In rejecting claim 9 the Examiner states the following: "Furnival teaches a plurality of apertures penetrating through the flexible substrate, the plurality of apertures arranged in a regular configuration and intercalated into the plurality of contact pads." As pointed out by the applicants in their response to the Office Action of July 19, 2002, Furnival fails to teach any contact pads. The structures described in the figures and text of the Furnival reference are conductive traces and tabs configured to connect traces from one side of the rigid substrate to the other. Accordingly, inasmuch as Furnival fails to teach contact pads, Furnival cannot teach intercalated apertures. For its part, the prior art described in the specification indicates no requirement to make connections from one side of the substrate to another nor does Furnival suggest that the interfacial connections disclosed therein would function properly on a flexible substrate, teaching, rather, that the substrate is preferably rigid. Thus, there is no motivation in either the prior art or Furnival to combine the holes of Furnival

with the connecter of claim 9. Additionally, inasmuch as Furnival fails to teach contact pads, or a positional relationship of the holes with reference to contact pads, if the references were combined, there would be no teaching to place the holes among or near the regular configuration of contact pads. Furnival thus fails to add the teaching also missing from Stopperan of having the apertures intercalated with the plurality of contact pads. Accordingly, claim 9 is allowable over the combination of Furnival with the prior art of the specification.

With respect to the rejection of claim 10, as previously indicated, there is no suggestion or motivation to combine the teachings of Furnival with the prior art of the specification. Additionally, again as indicated previously, inasmuch as Furnival is silent on the use of contact pads, or the positioning thereof, there is no teaching by either of the references individually, or by a combination thereof to form a strain relief structure between two contact pads. Accordingly, claim 10 is allowable over the cited prior art. Claims 11-13, as dependent claims from claim 10, are also therefore allowable.

Claim 14 recites the following:

> 14. (Previously Added) A flexible connector, comprising:
> a flexible substrate;
> a plurality of contact pads formed on a first surface of the substrate and arranged in a regular configuration in a contact region of the substrate; and
> means for increasing flexibility of the substrate in the contact region.

The prior art described in the specification in view of Furnival, fails to teach or suggest means for increasing flexibility of the substrate in the contact region, as recited by claim 14. While the prior art of the specification describes the problems associated with circuit connectors having high densities of contact pads, there is no suggestion in the description of the related art of the specification describing a solution. Thus, in this combination of references, to suggest or anticipate the connector of claim 14 a teaching to increase flexibility of the substrate in the contact region, together with a teaching of the means for doing so must be found in the Furnival reference. Furnival fails in all of the above, as follows: Furnival fails to teach a need to increase flexibility; Furnival fails to teach a contact region structure of any kind; and Furnival fails to provide any teaching as to how such increased flexibility can be achieved. Furnival teaches away from increased flexibility, as previously indicated, teaching the use of a rigid substrate. Where a flexible substrate is incorporated into Furnival's structure, the substrate is bonded to the rigid printed circuit substrate, rendering the flexible substrate rigid therewith

(column 2, lines 50-55). Where a connector is mentioned by Furnival, Furnival makes clear that that connector is beyond the boundaries of the substrate in question, and offers no teaching or information regarding the nature of that connector. Thus, the prior art of the specification combined with Furnival fails to teach or suggest the connector of claim 14, which is therefore allowable thereover. Claims 15-17 are also allowable, as dependent claims from claim 14.

The examples cited from the specification in support of the allowability of particular claims are cited for clarification of the issues in question, or are used to demonstrate the inadequacy of the cited reference in addressing or enabling the limitations of the particular claim. The scope of the claim in question is not limited to the embodiments or structures disclosed in the cited examples.

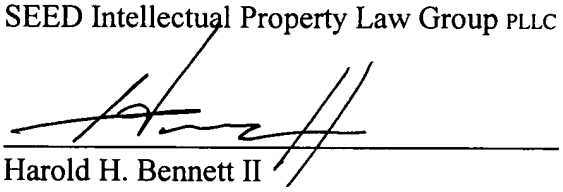
The Commissioner is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited. In the event the Examiner finds minor informalities that can be resolved by telephone conference, the Examiner is urged to contact applicants' undersigned representative at (206) 622-4900 in order to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

Respectfully submitted,

Stephen V.R. Hellriegel et al.

SEED Intellectual Property Law Group PLLC



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they must suffer for it〉 **b** *of an impersonal force* : lacking any directing or controlling consciousness 〈our fate is in the hands of ~ chance〉 **c** : marked by complete insensibility 〈lying helpless in a ~ stupor〉; *esp* : drunken to the point of insensibility : DEAD-DRUNK **4** : made or done without sight of objects or knowledge of facts comprising the chief or usual means of guidance or judgment 〈a ~ purchase〉: as **a** : performed solely by the aid of data given by instruments within an airplane and without direct sight of landmarks 〈a ~ landing〉 〈~ flying〉 **b** *in card games* : made without seeing some relevant factor (as one's own hand or the dummy) 〈a ~ lead〉 **c** : made or done from psychological test data without reference to other case material 〈~ analysis〉 〈~ interpretation〉 **5** : DEFECTIVE, INCOMPLETE, ABORTIVE: **a** *of plants or plant parts* (1) : SUPPRESSED (2) : lacking a growing point (3) : failing to produce flowers or seeds — used esp. of buds and bulbs **b** *music* : having alternate tones in different registers 〈a ~ trill〉 〈a ~ octave series〉 **c** : incapable of producing a print — used of a lithographic surface 〈the plate went ~ after 10,000 impressions〉 **6 a** *archaic* : lacking in light or brightness : DARK 〈the little ~ bedchamber —Samuel Pepys〉 **b** *obs* : UNLIGHTED 〈a ~ candle〉; *also* : having its light concealed 〈a ~ lantern〉 **c** : DULL : lacking in brightness or luster; *esp* : not polished or brought to a high gloss : finished dull 〈a mellow ~ finish to the paneling〉 **d** : impressed or tooled without gilding, inking, or coloring 〈~ lettering〉 〈~ scoring〉 **7** : difficult to discern, make out, or discover : hard to locate or identify : OBSCURE, HIDDEN: as **a** *archaic* : out of the way; *also* : SECRET 〈a ~ meeting place〉 **b** *archaic, of a track or way* : dim and ill-defined; *also* : not easily followed or traced : INVOLVED, INTRICATE 〈the ~ mazes of this tangled wood —John Milton〉 **c** (1) *of writing* : ILLEGIBLE; *esp, of mail* : lacking a complete or legible address (2) : concerned with the handling of blind mail **d** *of the sense of a passage* : unintelligible or uncertainly determinable **e** *of material objects* : constructed or arranged so as to be hidden from sight : COVERED 〈a ~ veneer〉 〈~ seams in a shoe〉: as (1) *of a ditch or other water channel* : consisting of a cut in the soil filled loosely with stones between which water can trickle or percolate (2) *of minerals and lodes and strata* : not appearing in an outcrop at the surface 〈a ~ vein〉 (3) *of roads, driveways, and crossings* : screened from the view of oncoming drivers or engineers 〈a ~ crossroad〉 **8 a** : having but one opening or outlet : closed at one end : not permitting passage or flow all the way through 〈a ~ alley〉 〈~ sockets〉 〈the ~ gut〉 **b** *of a rivet or other fastener* : designed to be inserted and made fast from one side **c** *geol* : terminating abruptly where it might be expected to continue 〈a ~ joint in rocks〉 〈a ~ valley that ends downstream where drainage disappears underground〉 **9** : having no opening for light or passage : BLANK 〈a ~ wall〉: as **a** *of a hedge* : too thick to see through or pass through **b** *of a structural member* : made without an opening but like a member that normally has an opening 〈a ~ arch〉 〈a ~ window over the stairs〉 **10** *railroading* : turned edgewise — used of a target or of its position

²blind \"\ *vt* -ED/-ING/-S [ME *blinden*, fr. *blind*, adj.] **1** : to make blind: **a** : to deprive of the sense of sight 〈his right eye was ~*ed* when he was a child〉 **b** : to deprive of insight or understanding 〈prejudice usually ~*s* judgment〉 **c** : DECEIVE, FOOL, BEDAZZLE **d** : to deprive temporarily or partially of vision : make seeing difficult for or painful to : DAZZLE 〈the hot glare ~*ed* her as she stepped into the street〉 **2 a** : to withhold light from : DARKEN 〈shrubbery ~*ing* all their windows〉 **b** : HIDE, CONCEAL **c** : to make dim by comparison : OUTSHINE, ECLIPSE 〈torches that ~ the candles〉 **d** : to render nonlustrous : DULL 〈a synthetic fabric may need to be ~*ed* in the finishing process〉 **3** : to fill the interstices of : CLOG: as **a** : to cover (a newly paved road) with a coating of sand and gravel in order that joints may be filled **b** : to cover (drain tiles) with earth while the trench is being filled **4** : to stamp (as a book cover) without gilding or coloring — often used with *in* **5** : to protect with blindages or with blinds

³blind \"\ *n* -S **1** : something to hinder sight or keep out light: as **a** : a screen used to deflect or redirect light or to restrict observation from without: as (1) : WINDOW SHUTTER (2) : a roller window shade (3) : VENETIAN BLIND (4) *chiefly Brit* : AWNING (5) : 3RISE-SOLEIL (6) : a shutter for a porthole **b** : BLINDER **c** : a cloth covering for the eyes used esp. in games **2** : a place or means of concealment : AMBUSH 1; *esp* : a concealing enclosure from which a person may shoot game or observe wildlife **3 a** : something put forward to screen or cover another object or design : SUBTERFUGE, DECEPTION 〈the holding company was a ~ for out-of-state interests〉 〈his helpful offer is no more than a ~〉 **b** (1) : a person serving as an agent for another who keeps under cover (2) : one who acts as a decoy or distraction **4** : hand tooling without gilding or coloring 〈bindings decorated in ~〉 **5 a** : BLINDAGE **b** : a strong frame of uprights and crosspieces used to support a blindage **6** *card games* **a** : an obligatory opening bet in some forms of draw poker made by the player at the dealer's left before the cards are dealt and often constituting a raise of the ante **b** : the player who makes this bet **c** : WIDOW 3 **7** *railroading* **a** : BLIND BAGGAGE **b** : the platform of a blind baggage immediately behind the tender — usu. used in pl. **8** *slang Brit* : a noisy usu. drunken party : BRAWL

⁴blind \"\ *adv* [¹*blind*] : BLINDLY: as **a** : to the point of insensibility 〈~ drunk〉 **b** : without the aid of visual or other indicators that are usu. a source of guidance or judgment 〈learning to fly ~〉 **c** : RECKLESSLY, HEEDLESSLY 〈I'd rather go it ~ than not get home at all〉

blind advertisement *n* : an advertisement that does not disclose the name of the advertiser

blind·age \'blīndij\ *n* -S [F, fr. *blinder* to screen, protect (fr. *blinde* blind to screen military operations, fr. G *blende*, fr. *blenden* to blind, fr. OHG *blenten*) + *-age* — more at BLIND] : an overhead protection: as **a** : an earth-covered screen supported by a blind for an advanced trench or approach **b** : a large deep dugout often with bunks and other fittings

blind alley *n* : something that offers no opportunity for progress or advancement

blind area *n* : a wholly or partly covered area outside the wall of a building to keep moisture from the wall

blind attic *n* : a closed unfinished dead space immediately beneath the roof of a building

blind baggage *n* : a railway baggage, express, or postal car that has no door or opening at one end; *esp* : one immediately behind a tender

blind blocking *n* : BLIND 4

blind bond *n* : a masonry bond in which the headers extend only halfway through the tier of face brick all of which are stretchers and some of which are split lengthwise to accommodate the ends of the headers

blind bridle *n* : a bridle provided with blinders

blind catch *n* : BLINDFAST

blind date *n* **1** : a date arranged by a third person between two persons of opposite sex who have not previously met **2** : either participant in a blind date

blinded *adj* **1** : made blind : DAZZLED, OBSCURED, DARKENED **2** : furnished with a blind or blinds 〈green-*blinded* windows〉 **3** : having the window blinds closed

blind eel *n* **1** : CONGO SNAKE **2** : seaweed accidentally hauled up in a net — used esp. by fishermen

¹blinder *comparative of* BLIND

²blind·er \'blīndə(r)\ *n* -S **1** : either of two flaps on a horse's

subterranean streams in No. and So. America and Africa (as certain catfishes or members of the genus *Amblyopsis*) **2** : any of certain eyeless deep-sea fishes

blind flange *n* : a cover plate bolted or otherwise fastened across a pipe flange to seal the pipe

¹blind·fold \'blīn(d),fōld\ *vt* -ED/-ING/-S [by folk etymology fr. ME *blindfelden*, alter. of *blindfellen* to strike blind, to blindfold, fr. *blind* + *fellen* to fell, strike down — more at FELL] **1** : to cover the eyes of with or as if with a bandage **2** : to hinder from seeing; *esp* : to keep from comprehension

²blindfold \"\ *adj* [by folk etymology fr. ME *blindfeld*, *blindfelled*, fr. past part. of *blindfellen*] **1** : having the eyes covered **2 a** : lacking mental vision or understanding **b** : lacking consideration : HEEDLESS, RECKLESS 〈a ~ fury〉

³blindfold \"\ *n* **1** : a bandage for covering the eyes and shutting out light or vision **2** : something that acts as a blindfold esp. in obscuring mental or physical vision 〈do not let the wool grow down into a ~ that interferes with grazing〉 〈his arrogance was a ~ shutting him away from his fellows〉

blindfold chess *n* : chess played without sight of the board

blind·fold·ed·ness *n* -ES : the quality or state of being blindfolded

blind gentian *n* : CLOSED GENTIAN

blind goby *n* : PINKFISH

blind gut *n* [so called fr. its having only one opening] : CECUM

blind head *n, obs* : a cover without outlet for a retort or other distilling vessel; *also* : the whole apparatus of which the cover is a part

blind header *n* : a masonry header in the interior of a wall; *also* : SNAP HEADER

blind hookey *n, card games* : a variety of banker and broker

¹blinding *n* -S [ME, fr. gerund of *blinden*] **1** : the act of making or the fact of becoming blind **2** : the sand and fine gravel used to blind a road

²blinding *adj* [fr. pres. part. of ²*blind*] **1** : making blind or as if blind: **a** : depriving of sight **b** : depriving of understanding : CONFUSING **c** : brilliant with light or color : DAZZLING **d** : OBSCURING 〈~ tears〉 **2** *slang* : DARNED, BLAMED, BLASTED 〈what are you in such a ~ hurry over〉 — **blind·ing·ly** *adv*

blinding tree *n* : BLIND-YOUR-EYES

blind·ish \'blīndish, -dēsh\ *adj* [¹*blind* + *-ish*] : somewhat blind

blind·ism \-ˌdizəm\ *n* -S : a form of behavior characteristic of blind persons

blind·less \-dləs\ *adj* [³*blind* + *-less*] : having no blind

blind lift *n* : a catch for raising or lowering a window blind

blind-loaded \ˈ=ˌ=ˈ=\ *adj* **1** : containing no bursting charge but loaded with sand so as to come up to service weight — used of a shell **2** : not having a fuse, the bursting charge being exploded by the heat of impact — used of a shell

blind·ly *adv* [ME, fr. ¹*blind* + *-ly*] : in a blind way 〈groping ~ in the dark passage〉: **a** : without reason or understanding : without comprehension or consideration 〈let no one follow me ~〉 **b** : without conscious purpose : MECHANICALLY 〈toying ~ with the ringlet on her neck〉 **c** : without an opening or outlet 〈the path ended ~ at a high brick wall〉

blind-man \-dmən\ *n, pl* **blindmen** [*blind* (*mail*) illegible or insufficiently addressed mail + *man*] *chiefly Brit* : BLIND-READER

blind·man's buff \'blīn(d),manz-, -ˌmaa(ə)nz-\ *n* [*blind man* + *buff* (buffet)] **1** : a group game in which a blindfolded player tries to catch and identify any other member of the group **2** : something concerted with trickery and bedazzlement or carried out without awareness of the facts and issues involved

blindman's holiday \"-\ *n* [*blind man*] *archaic* : TWILIGHT

blind mortise *n* : a mortise that does not extend entirely through the material in which it is cut

blind-nail \ˈ=ˌ=\ *vt* : to nail in such a way that nailheads are not visible on the face of the work

blind·ness \'blīnnəs\ *n* -ES [ME, fr. ¹*blind* + *-ness*] **1** : want of discernment esp. with reference to some particular object or matter : failure to exercise understanding, judgment, or discrimination **2 a** : the quality or state of being blind; *specif* : that of having less than 1/10 of normal vision in the more efficient eye when refractive defects are fully corrected by suitable lenses — compare COLOR BLINDNESS **b** : psychic inability to perceive visual images although the visual receptors are functional — called also *mental blindness*, *mind blindness*, *psychic blindness* **c** : lack of sensory perception involving all or part of some sense other than sight 〈taste ~〉 〈smell ~〉 **3 a** *obs* : CONCEALMENT **b** : OBSCURITY **4** *of plants* : failure to produce a growing tip or flowers or to develop vegetative parts — compare ¹*blind* 5a

blind nettle *n* [ME *blind netyll*, fr. OE *blindnetle*, fr. *blind* + *nette* nettle — more at NETTLE; fr. its lack of sting] **1** : WHITE DEAD NETTLE **2** : HENBIT

blind officer *n* [*blind* (*mail*) illegible or insufficiently addressed mail] *chiefly Brit* : BLIND-READER

blind P \-ˈpē\ *n* [so called fr. the fact that the loop is inked in] : the paragraph mark 〈¶ is one form of *blind P*〉

blind pig *n, slang* : BLIND TIGER

blind pit *n, bot* : a pit lacking a complementary pit and commonly found opposite an intercellular space — see PIT-PAIR

blind pocket *also* **blind pocket psorosis** *n* : a phase of psorosis of citrus trees characterized by a creasing of the trunk of the tree that results in a fluted effect

blind pool *n* : a pool of funds placed at the discretion of the manager

blind pull *n* : BLIND LIFT

blind pulley *n* : DEADEYE

blind-punch \ˈ=ˌ=\ *vt* : to punch (as metal) only a part of the way through

blind rat *n* : MOLE RAT

blind-reader \ˈ=ˌ=ˈ=\ *n* [*blind* (*mail*) illegible or insufficiently addressed mail] *chiefly Brit* : a post-office clerk whose duty is the deciphering of illegible or insufficient addresses

blind robin *n* : a smoked herring

blinds *pl of* BLIND, *pres 3d sing of* BLIND

blind-seed disease \ˈ=ˌ=\ *also* **blind seed** *n* : a disease of forage grasses (as rye grass and fescue) caused by an ascomycetous fungus (*Phialea temulenta*) and resulting in abortion of the seed

blind set *n* : an unbaited trap hidden in the runway or burrow of an animal — compare BAIT SET

blind shaft *n* : WINZE

blind shell *n* **1 a** : a blind-loaded shell **b** : ¹DUD 5 **2** [so called fr. the closing of the apex at maturity] : a mollusk of the family Caecidae

blind side *n* **1** : the side on which one that is blind in one eye cannot see **2** : an aspect of a matter in which one can see no fault **3** : the ground on the side of a rugby scrum opposite to the side the referee stands on

blind siding *n* : a railroad siding located at a point where there is no agent or means of communication

blind snake *n* **1** : a snake of the family Typhlopidae or of the related Leptotyphlopidae — called also *worm snake* **2** : any of various limbless burrowing lizards

blind snipe *n* : WOODCOCK 1a(2)

blind spot *n* **1 a** : the point in the retina not sensitive to light where the optic nerve passes through the inner coat of the eyeball — see EYE illustration **b** : a portion of a field not seeable or inspectable with available equipment 〈one limitation of radar is the existence of *blind spots* at low levels〉 **2** : an area in which one fails to exercise understanding, judgment, or discrimination **3** : a locality in which radio reception is

blind teat *n* : a teat that does not permit passage of milk (as an occluded or inverted teat)

blind tiger *n* [prob. so called fr. the evasion of prohibition laws by selling liquor in establishments disguised as halls for exhibiting natural curiosities] *slang* : a place that sells intoxicants illegally : SPEAKEASY

blind tire *n* : BALD TIRE

blind-tool \ˈ=ˌ=\ *vt* : to hand-tool (as the cover of a book) without gilding or coloring — compare BLIND-STAMP

blindworm \ˈ=ˌ=\ *n* [¹*blind* + *worm*] **1** : a small burrowing limbless lizard with minute eyes; *esp* : a small-scaled European lizard (*Anguis fragilis*) that feeds on grubs and worms and is popularly believed to be blind — called also *slowworm* **2** *archaic* : ADDER

blind-your-eyes \ˈ=ˌ=ˈ=\ *n, pl* **blind-your-eyes** [so called fr. its volatile juice] : an Australian tree (*Exocoecaria agallocha*) — called also *milky mangrove*, *poison tree*

bling·er \'bliŋə(r)\ *n* -S [origin unknown] *slang* : a superlative example of its kind 〈his cold was a real ~〉

blini *or* **blinis** *pl of* BLIN

¹blink \'bliŋk\ *vb* -ED/-ING/-S [ME *blinken* to open one's eyes; prob. akin to MD & G *blinken* to glitter, shine, OHG *blanch* shining, bright, white — more at BLANK] *vi* **1 a** *obs* : to look glancingly : PEEP, GLANCE **b** : to look with half-shut winking eyes (as when roused from sleep or dazzled by strong light) 〈seated in her obscure corner ~*ing* at the fire〉 〈the glare on the snow made us ~〉 **c** : to open and shut the eye repeatedly or rapidly : wink involuntarily 〈one eye ~*ing* and twitching〉 **2** *of light or a source of light* **a** : to shine intermittently : FLICKER, TWINKLE **b** : to shine dimly or uncertainly 〈sun ~*ing* through the strands of fog〉 **3 a** : to look evasively : look with ignoring or condoning — usu. used with *at* 〈modern popular philosophy ~*s* at these facts —M.R.Cohen〉 **b** : to look with surprise : become startled, amazed, or dismayed — used with *at* 〈a professional statistician might ~ at the methods though the results seem reasonable〉 ~ *vt* **1** *obs* : to cause to sour : make sour (as milk or beer) **2** *of a sporting dog* : to refuse to see and point (game) 〈his dog *blinked* the first bevy of the day〉 **3 a** : to close and open (the eye) involuntarily : WINK 〈he ~*ed* his tired eyes〉 **b** : to remove (as tears) from the eye by blinking **4** *chiefly Scot* : to put the evil eye on : BEWITCH **5 a** : to deny recognition to : deliberately evade : IGNORE — often used in negative constructions 〈there was no ~*ing* the fact that she had been worried —Helen Howe〉 or with *away* 〈truths that at the turn of the century were firmly ~*ed* away —*Saturday Rev.*〉 **b** : to be aware of : RECOGNIZE (if we ~ the truth we must admit our share of responsibility〉 **6 a** : to cause to emit flashes or twinkles of light 〈he ~*ed* his flashlight to show us the way〉 **b** : to signal by a blinker

²blink \"\ *n* -S **1** *chiefly Scot* : GLIMPSE, GLANCE 〈a view on a bit of empty road, houses, and a ~ of sea —R.L.Stevenson〉 **2 a** : a brief show of light : GLEAM, GLIMMER, SPARKLE 〈a ~ of bright flame〉 **b** : a brief period of time : INSTANT, MOMENT, TRICE **3** : an involuntary shutting and opening of the eye : WINKING **4** *dial* : milk that is slightly sour **5 a** : a whitish or mottled appearance of the sky about the horizon caused by the reflection of light from an ice field or from scattered ice — compare ICEBLINK **b** : a dark appearance of the sky about the horizon caused by the absence of reflected light due to open water — compare WATER SKY — **on the blink** *adv (or adj)* : in or into a disabled or useless condition : INDISPOSED : out of order

³blink \"\ *adj* : BLINK-EYED

⁴blink \"\ *n* -S [by shortening] : BLINKER 3

blink·ard \'bliŋkə(r)d\ *n* -S [¹*blink* + *-ard*] **1** *archaic* : one that blinks with or as if with weak eyes **2** : a stupid, slow-witted, or obtuse person

blink comparator *n* : an optical instrument by means of which two pictures identical in all but a few details may be registered in a single visual field and viewed alternately in rapid succession

blinked *adj* [fr. past part. of ¹*blink*] : affected with blinking

¹blink·er \'bliŋkə(r)\ *n* -S [¹*blink* + *-er*] **1** : one that blinks: as **a** *archaic* : COQUETTE **b** : a sporting dog that refuses to see and point game or to hold to a point and flush his game **c** (1) : a device consisting essentially of a light that can be flashed on and off regularly as a warning (as at a railway crossing) (2) : a traffic light arranged to blink rather than show a color for a sustained period **d** (1) : a device consisting essentially of a light that can be flashed on and off in a sequence of coded intervals for signaling a message (as from ship to ship) (2) : a message sent by means of a blinker **2 a** (1) : BLINDER 1 (2) : a cloth hood with shades projecting at the sides of the eye openings used on skittish racehorses — usu. used in pl. **b** : something that impairs mental or moral perception **3** *also* **blink** : a young or undersized mackerel smaller than a tinker

²blinker \"\ *vt* **blinkered**; **blinkered**; **blinkering** \'bliŋk-(ə)riŋ\ **blinkers** **1** : to put blinders or blinkers on 〈they ~*ed* themselves against the facts〉; *specif* : HOODWINK 〈a person ill-equipped for his task, ~*ed* as he is by long association with partisan groups〉 **2** : to send (a message) by means of a blinker 〈~*ed* a breakfast invitation from shore —*Newsweek*〉

blinkered *adj* : NARROW, OBTUSE, LIMITED

blinker tube *n* : a tube for confining signals by blinker to a single direction

blinker-eyed \ˈ=ˌ=\ *adj* : habitually winking

blinking *adj* [fr. pres. part. of ¹*blink*] *slang Brit* **1** : DAMNED, BLASTED 〈a ~ nuisance〉 **2** : COMPLETE, UTTER 〈a ~ fool〉

blink·ing·ly *adv* : with blinking eyes : EVASIVELY

blink microscope *n* : a blink comparator in which the compared images are magnified

¹blinks *pres 3d sing of* BLINK

²blinks *n, pl* **blinks** [fr. pl. of ²*blink*; fr. the fact that the flowers do not open fully] : a small herb (*Montia lamprosperma*) of northern regions — called also *blinking chickweed*, *water chickweed*

blinky \'bliŋkē, -ki\ *adj, usu* -ER/-EST [¹*blink* + *-y*] **1** : BLINKING, BLINK-EYED **2** *dial* : slightly sour — used esp. of milk or beer

blin·ter \'blintə(r)\ *vi* -ED/-ING/-S [prob. freq. of obs. Sc *blent* to gleam, glance, fr. ME (northern dial.) *blenten*, fr. *blent*, *blenked* past part. of *blenken* to deceive, swerve, gleam, glance, fr. OE *blencan* to deceive — more at BLENCH] **1** *Scot* : FLICKER, GLIMMER 〈the firelight ~*ed* on her face〉 **2** *Scot* : BLINK

blin·tze \ blintsə\ *or* **blintz** \'blints\ *n, pl* **blintzes** [Yiddish *blintse*, fr. Russ *blinets*, dim. of *blin* pancake, fr. ORuss *mlinŭ*; akin to Russ *molot'* to grind, OHG *malan* — more at MEAL] : a thin rolled pancake with a filling usu. of cream cheese

bliny *pl of* BLIN

¹blip \'blip\ *n* -S [imit.] **1** : a short crisp sound 〈the ~ of a switch button〉 **2** : an image on a radar screen

²blip \"\ *vb* **blipped**; **blipped**; **blipping**; **blips** *vt* : to strike or slap ~ *vi* : to make or cause a blip

blirt \'bli(ə)rt, 'blərt\ *Scot var of* BLURT

bliss \'blis\ *n* -ES [ME *blis*, *blisse*, fr. OE *bliss*, *blīths*; akin to OS *blidsea* bliss; derivative fr. the root of E *blithe*] **1** : a state of complete or ecstatic happiness 〈they lived in perfect loving ~〉 〈the ~ of complete understanding can only come to the equally endowed〉 **2 a** : the perfect and exalted joy of saved souls : BEATITUDE 1 **b** : the place where such joy is experienced : PARADISE, HEAVEN **c** : the state of enjoying such joy **3** *archaic* : a cause of happiness **syn** see HAPPINESS

bliss·ful \'=fəl\ *adj* [ME *blisful*, fr. *blis* + *-ful*] **1** : full of, marked by, or causing bliss : very happy 〈a ~ couple of young